

16 January 1958

**CONFIDENTIAL**

MEMORANDUM FOR: C/SE/B

ATTENTION :

25X1

SUBJECT : Suitability of Worthington V4A3 Compressor for Use  
with Hydrogen

REFERENCE :

25X1

1. In the cable referenced above inquiry was made as to the suitability of the subject compressor for use with hydrogen and at the request of [ ] TSS/ED undertook an investigation of this problem. The results of the inquiries made indicate that this compressor is suitable for use with hydrogen.

25X1

25X1

2. Working with hydrogen always involves certain risks and of course the usual precautions apply in the use of this machine. Means must be applied for grounding out static electricity and providing adequate ventilation, etc. In addition to these, care must be taken to insure that all intake lines and the crankcase of the compressor are pressurized with hydrogen at all times to avoid the possibility of drawing air into the system. An explosion proof electric motor is recommended for use with the compressor.

3. It may be of interest to note that there are two compressors in use at ERDL, Fort Belvoir, Virginia, for hydrogen compression that are essentially the same machines and have not been modified in any way. These are V4A4 models by the Worthington Company, and have four compression stages instead of the three found in the subject unit. This difference has no bearing on this problem whatever and the two model types may be considered identical from the standpoint of safety.

4. Should further information on this or related subjects be desired, TSS/ED will be happy to cooperate in any way upon request.

Chief

TSS/Engineering Division

25X1

DD/P/TSS/ED

25X1

*Sullivan, General*

DOC 36	REV DATE 30/6/60	BY 85122
ORIG COMP 056	OPI 36	TYPE 02
ORIG CLASS 2	PAGES 1	REV CLASS C
JUST 12	NEXT REV 010	AUTH: HR 70-2

**CONFIDENTIAL**